

THE STATE OF AQUATIC INFORMATION IN SOUTHERN AFRICA

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ABSTRACT: In order to determine the state of aquatic information in Southern African countries, a questionnaire was designed and relevant information collected from information specialists, librarians and researchers in ten countries in the region. A total of 36 questionnaires were returned and analysed. The results indicate that while South African libraries have access to and make use of a wide range of information resources, libraries in other Southern African countries are in a difficult position, having to cope with severely limited resources. The paper concludes with a few recommendations to IAMSILIC for future support of struggling libraries in the region and their staff.

INTRODUCTION

The International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSILIC) is a truly professional organisation and its members represent institutions from all over the world. The majority of its members work in well-developed libraries or information centres, where modern technology provides them with easy access to the widest range of international information resources.

Unfortunately, most IAMSILIC members representing developing countries, especially those coming from the African continent, are working in totally different environments. Library budgets are normally extremely limited (or non-existing) and due to lack of sufficient infrastructure, access to the Internet and everything it has to offer, is severely limited.

As an organisation committed to promote the sharing of aquatic information resources among its members, IAMSILIC regards it as being its task to develop the capacity of members in developing countries and to facilitate or assist, where possible, access to international information resources. The *where*, the *what* and the *how* of such an undertaking, however, has thus far been extremely difficult to ascertain.

At the 2000 IAMSILIC Annual Conference in Victoria, Canada, the need for regular reporting on the state of aquatic information provision in selective geographical regions was identified. This review of the current state of aquatic information in the Southern

African region is an attempt to address the expressed need, and the results will assist the IAMSILIC Executive in formulating a policy of support to developing countries.

INFORMATION PROVISION IN EASTERN EUROPE

In 1996, Mr. Ian Pettman, on behalf of the European Association of Aquatic Sciences Libraries and Information Centres (EURASLIC), compiled a report for the Intergovernmental Oceanic Commission in Paris, on the state of information provision for the aquatic sciences in Eastern European countries (Pettman 1996). Since 1989, countries in Eastern Europe experienced enormous political, economical and social changes and the results of years of environmental mismanagement required urgent remedial actions. In order to solve these problems, close collaboration with Western European countries was essential. Such collaboration was even more essential in the library and information services of the aquatic sciences in order to make optimal use of existing resources and to prevent duplication. The Report made several recommendations for the development of information resources in Eastern European countries, as well as for effective information sharing in the whole of the European continent. Whether these recommendations were ever turned into action, is unknown.

RECOSCIX-WIO

Any attempt to review the aquatic information resources in any region of the African continent, needs to take note of the contributions of RECOSCIX-WIO (Regional Cooperation in Scientific Information Exchange in the Western Indian Ocean Region). This initiative, funded mainly by UNESCO's Intergovernmental Oceanographic Commission (IOC) with further support from a few Belgian institutions, has made a major contribution in building capacity and facilitating information exchange in the Western Indian Ocean region, i.e. East African and Indian Ocean island countries. The project is coordinated by the Kenya Marine Fisheries Research Institute (KMFRI) and is based in Mombasa, Kenya.

Participating marine libraries in the region have been equipped with a wide range of computer equipment, including PCs, scanners and CD-ROM writers. Training in the use and application of equipment were also provided. Through RECOSCIX-WIO, journals are received in Mombasa, after which contents pages are distributed to all member libraries. Copies of articles may then be ordered from Mombasa, which are delivered to them, using Arial software and equipment.

A similar initiative was recently established in the Eastern Atlantic Ocean region, involving west African countries. West African countries, mainly in the northern hemisphere participate in this initiative.

QUESTIONNAIRE

To collect relevant information for this paper, a questionnaire was designed and submitted for evaluation of its scope and relevancy to Ms Edna Nyika, an IAMS LIC member from the University of Dar es Salaam, Zanzibar, Tanzania. Thereafter, questionnaires were distributed and results collected as follows:

- Delegates attending the 6th Bi-annual Congress of the Southern African Online User Group (SAOUG), 20-21 June 2001, Midrand, South Africa. Members of SAOUG are highly skilled librarians and information professionals, on par with their colleagues in Europe and Northern America. These information specialists handle information on a wide range of subject areas, and only a small portion concentrate on the aquatic sciences.
- Representatives from eight Southern African countries, invited to attend a training session on the use and application of *SAWINET*, an Internet-based information resource, containing details on *integrated water resource management* initiatives in the Southern African region, 16-17 July 2001, Harare, Zimbabwe. The development of SAWINET is sponsored by the Global Water Partnership (GWP) and is managed by the Institute for Water and Sanitation Development in Harare, Zimbabwe. Attendants represented the government sector, as well as academic and research institutions.
- Southern African members of IAMS LIC

Questionnaires were also mailed or faxed to librarians (mainly South African) with a direct involvement in aquatic information and who had not been approached previously. This included, for example, librarians from the Department of Water Affairs & Forestry, Rand Water and Umgeni Water.

SCOPE OF QUESTIONNAIRE

Southern Africa is a region with a low annual rainfall, limited groundwater resources and characterised by an absence of large, sustainable rivers. Management of water resources in general, is therefore of extreme importance in the future economic development of the whole region. The Southern African region also includes several landlocked countries: Botswana, Zimbabwe, Lesotho, Swaziland, Zambia and Malawi. It was therefore decided to collect information from both freshwater and marine science libraries.

Questions addressed the following subjects (a copy of the questionnaire is attached):

Organisational details

Personal details

Contact details

Type of organisation represented

Library staff and training level
Information about traditional information resources
 Number of books in library collection
 Number of journal titles received
 Subscription to electronic journals
 Involvement in formal information exchange
 Details on catalogues of library holdings and format
 Current awareness services
Information provision to outside clients
 Document delivery service
 Information products developed
Users of information and type of information required
 Main clients/users of information
 Information subject areas served
Use of bibliographic databases
Use of international databases
 Use of local/in-house databases
Details about computer equipment and Internet access
 Age of PC currently used
 Access to Internet
 Reliability of Internet connection
 Web site, if any
 Responsibility for web site development
Financial resources
 Funding agents

RESULTS

- a. A total of 36 questionnaires were returned, Were collected from the SAOUG Congress, From Southern African IAMSILIC members, From the SAWINET training session in Harare, and Were returned by librarians who were approached individually. The questionnaires provided information on aquatic information resources in the following countries:

Country	Number of questionnaires	Percentage of total
South Africa	15	41.7
Namibia	4	11.1
Botswana	2	5.6
Lesotho	3	8.3
Swaziland	2	5.6
Zimbabwe	3	8.3
Zambia	2	5.6
Malawi	2	5.6
Mauritius*	2	5.6
Tanzania*	1	2.7

** Members of RECOSCIX-WIO*

b. Organisations represented

The breakdown for organisations represented in the questionnaires, is as follows:

Organisation	Number	Percentage of total
Government department	12	30.0
Semi-government*	6	15.0
Non-government Organisation	3	7.5
University	10	25.0
Research Institution*	6	15.0
Consultant	1	2.5
Industry	2	5.0

** Some respondents indicated that they work for a semi-government organisation, doing research*

c. Number of people on library staff and training levels

South Africa (excluding university libraries)	
With university qualification	7
With college training	7
No formal library training	9
Non-South African countries	
With university qualification	13
With college training	6
No formal library training	13

Note:

Among the institutions without libraries were:

Department of Water Affairs, Zambia, the Ministry of Water Development, Malawi, and the School of Engineering, University of Zambia

d. Number of journal titles received:

The numbers varied from several thousand titles received by South African university libraries, down to so low as **four** titles received by both the University of Dar es Salaam, Tanzania and the Department of Water Affairs in Zambia. Other noteworthy numbers were:

Department of Water Affairs, Maun, Botswana	10 titles
Institute for Water and Sanitation, Zimbabwe	10 titles

e. Journals received in electronic format:

Excluding South African universities, **twelve** institutions received a total of only **twenty eight** journals in electronic format.

f. Member of consortia for information exchange

Only **seventeen** respondents indicated that they are participating in consortia activities (including IAMSILIC).

g. Use of current awareness service

A total of **twenty four** respondents indicated that they subscribe to a current awareness service, with *Current Contents* and *Uncover* being the most popular.

h. Interlibrary loan or document delivery service:

The majority of respondents (twenty one) are providing a document delivery or interlibrary loan service.

i. Clients or users of information:

A breakdown of the users of information provided the following interesting results (respondents were asked to indicate all categories of users, without indicating frequency or number of users in each category):

Researchers	28
Academic staff	17
Students	20
Government staff	13
Consultants	16
Industrial sector	5
School pupils	6
General public	5
Other	3

It is clear that the *academic community* (including students) is served by the majority of respondents, with the *research community* a close second.

j. Subject areas covered:

Information on the marine environment	1
Information on both marine and freshwater	9
Information on the freshwater environment	24

k. Access to international bibliographic databases:

Respondents were requested to indicate and list the international databases to which they had access, either via the Internet, or on CD-ROM. A total of twenty respondents indicated that they did not have any access to such databases. Among the most popular databases used by the other respondents, were ASFA (4), Water Resources Worldwide - NISC (6), Waterlit (6) and CAB (4).

l. Age of PCs used by respondents:

One year	12
Two years	8
Three years	10
Four years	
Five years	5
More than five years	1

m. Access to the Internet

Respondents were asked to indicate where their closest connection to the Internet was located.

From his/her desk	26
In the library	9
Central point in the building	6
Outside their building	2

Some respondents indicated that they had access from both their desk as well as from the library.

n. Reliability of Internet connection

Respondents were requested to indicate how reliable their Internet connection is. *Unfortunately, they were not asked about the **quality** of the connection, in terms of speed, ability to download files and general flexibility.*

Internet availability	All respondents	South Africans	Non-South Africans
Available most of the time	28	15	13
Regular problems	7	0	7
Unavailable most of the time	1	0	1

o. Web site and responsibility for development of site

Only **nine** respondents (all non-South African) indicated that their organisation did not have its own web site. For the rest, the site development is done internally, with only **two** institutions using the services of an outside company.

p. Funding received from outside sources (mostly international):

Among the international agencies providing funding to either individual institutions, or to the libraries of such institutions are SIDA, DFID, GTZ, the EU, UNESCO, etc.

ACCESS TO NON-BIBLIOGRAPHIC INFORMATION RESOURCES

Over the last few years, several overseas institutions funded the development of 'pockets' of non-bibliographic information in the Southern African region. Unfortunately, no central list or other source of reference listing details of all these isolated collections of information exist in the region. Information resources of **any** kind are so limited in the Southern African region that it has become of utmost importance to collect the relevant details and make it available to all interested parties in the region. Perhaps, if we learn to share **data**, we may also realise the value of sharing **bibliographic** information.

CONCLUSION

No survey is complete without drawing certain conclusions from the results of the survey. Interpreting the above results, the following should be noted:

- There are only a few specialised aquatic libraries in countries outside South Africa. Keeping in mind that countries like Botswana and, to a lesser extent, also Namibia, have vast areas of desert and semi-desert regions, this is understandable.
- Apart from marine libraries participating in RECOSCIX-WIO, no formal information resource sharing exist between aquatic libraries in the region.
- Libraries in the region have very limited access to traditional bibliographic databases available either via the Internet or on CD-ROM.
- Limited funding is available for purchasing and development of information resources.

- The survey indicated that, on the average, computer equipment used is not outdated.
- Internet access
Judging from the results of this survey, Internet access is easy and reliable in the southern African region. These results are surprising, especially in the light of the paper presented by Ms Beth Avery, "*Is it the Global Net?*" which projected a dim picture of the digital divide between developed and developing countries. This pessimistic view is supported by two articles recently published in South African publications^{2,3} and as expressed by a visiting agricultural consultant⁴. Unfortunately, as was indicated previously, the questionnaire could not establish the quality of the Internet links in the region. It could well be that, since the majority of institutions reviewed in this survey are government and academic institutions, they have access to modern equipment and better Internet accessibility! However, a researcher from Botswana mentioned that it normally took about 30 minutes before a successful Internet connection could be made. Any attempt to download a file from the Internet caused the whole system to 'bomb out'. Certainly Internet access was available to this researcher, but was it effective and useful?

IAMSLIC SUPPORT

How best can IAMSLIC assist Southern African (or other developing countries) to build capacity and establish functional and successful aquatic libraries:

- Training of aquatic library staff, e.g. by awarding scholarships to librarians from developing countries.
- Encouraging libraries in developed countries to donate duplicate publications and other information resources to working libraries in developing countries.
- Providing of funding to librarians in developing countries which will enable them to attend the annual IAMSLIC conference.
- Supporting libraries in developing countries in their application to international institutions and organisations for funding.

The ideal would be for IAMSLIC to establish a sustainable information resource sharing initiative for the Southern African region similar to RECOSCIX-WIO. Such an initiative will obviously have to be a long-term commitment, which will be costly and therefore, will most probably, fall outside the means of the organisation!

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"We found, in our brief reviews in Zimbabwe, Kenya and Pakistan (and the brief experience in Eastern Cape* was no different) that many frontline practitioners, and even university lecturers have very little, if any, access to the Internet. Again, I recognise that the RSA** is far ahead of the rest of Africa in this regard but the extension offices I saw were certainly not over rich with computers, with or without Internet access." 29 September 2001.

* Region in South Africa

** Republic of South Africa

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